1 Your Honor, that if Mr. Seiver would like to attempt 2 to bring in new documents, new notes -- he handed me 3 just a few moments ago a whole new stack 4 information that is, I guess, a recapturing of all the different data on all the different poles that I've 5 6 never seen before. 7 We've got from Mr. Harrelson two binders this thick of information evaluating these poles that 8 9 I've prepared to cross-examine this witness on. 10 this set of data that I can't go through and possibly 11 check the accuracy of the data, understand what he's 12 trying to convey, and conduct a meaningful cross-13 examination. 14 If Mr. Seiver would like to attempt to get 15 it in during redirect, they we can deal with my 16 objections at that time, but I don't think it properly 17 comes in on corrections to pre-filed written direct 18 testimony. It's new. 19

MR. SEIVER: Your Honor, I just wanted Mr. Harrelson to have his notes. These are notes that we created from and copies of existing exhibits in which he made his notations.

20

21

22

	Guil Power Exhibit 35 on Which he made his
2	notations and the pictures that were admitted as Gulf
3	Power exhibits on which he made his notations. So if
4	he gets questioned when we have this problem of where
5	a picture goes up on the screen and get questioned
6	about what's going on in that pole, he can look at his
7	notes and say, "Okay. That's pole 312-481. Yes.
8	Okay." And I think that would not only speed up the
9	examination, but greatly enhance, for me, the
10	examination.
11	JUDGE SIPPEL: You're carrying different
12	sizes, amounts of paper, Mr. Seiver. What are you
13	trying to show me? I don't know.
14	MR. SEIVER: Well, Your Honor, the first
15	thing
16	JUDGE SIPPEL: That was a one-sheeter.
17	MR. SEIVER: The one-sheeter is just notes
18	that go with the Knology pictures that he has.
19	JUDGE SIPPEL: And what are these other
20	notes?
21	MR. SEIVER: These are the notes, if you
22	follow, for example, on the first page, and Mr.

1	Harrelson can explain what he did. Gulf Power Exhibit
2	35, he copied it a number of times and wrote in from
3	the Osmose data, which is Gulf Power Exhibit 42, the
4	measurements they made.
5	With one exception, he calculated what
6	would be the top of the pole. I think if you recall,
7	there was no calculation as to what the height of the
8	pole was. He did that on his own based on the
9	standard pole heights.
10	And then, he took the pictures, which were
11	the Gulf pictures for each associated pole with that
12	Osmose data and transposed it, as well, so that he
13	could have a stick diagram and the picture with the
14	measurements that are identical to what's in Gulf
15	Exhibit 42.
16	JUDGE SIPPEL: You're overwhelming me with
17	all this data. Why do we need it all? Only if he's
18	asked on cross-examination?
19	MR. SEIVER: Yes, Your Honor. I didn't
20	want him to go up, like with Ms. Davis, without good
21	notes.
22	JUDGE SIPPEL: No. That's all right. You

1 can tell me straightforward. You don't have to start 2 comparing with somebody else. 3 I understand where you're going with this, 4 but --5 MR. CAMPBELL: Can I show you what I'm 6 dealing with, Your Honor, the exhibits that are 7 already in evidence, the measurements that he's 8 already performed, the testimony that he's already given about these poles, which don't contain, by the 9 10 way, the information that is on this document. 11 They're trying to slip in new information 12 that I haven't seen before. For example, the top of 13 the pole. Somebody went out and measured the height 14 of the top of the pole. I haven't seen that before from Mr. Harrelson. This is brand new. 15 16 JUDGE SIPPEL: I understand. I'm simply 17 trying to anticipate what could happen on cross-18 examination. I am going to leave these materials. 19 I'm going to return these back to Mr. Seiver. And 20 we'll just have to take it one step at a time. Let's 21 see how this cross-examination goes. That's my 22 ruling.

1	So far, I haven't seen a need for any
2	referencing to notes or preparation materials outside
3	of his testimony. So we'll take it one step at a
4	time.
5	I'm returning the documents to counsel.
6	You don't have those with you, or you do have them
7	with you?
8	THE WITNESS: I do.
9	JUDGE SIPPEL: You want to give them back
10	to counsel, please? Those are supplementary
11	materials. That being the color photos of the Knology
12	poles and the notations that the witness has prepared
13	that are outside the scope of his direct testimony.
14	So, okay, we're starting clean. All
15	right. Does that take care of all the corrections on
16	the written?
17	MR. SEIVER: I was going to add, move for
18	the admission of Mr. Harrelson's testimony as
19	Complainant's Exhibit B, Volumes 1 and 2, Your Honor.
20	MR. CAMPBELL: No objection, Your Honor.
21	JUDGE SIPPEL: Okay. Complainant's Exhibit
22	B, Volume 1 and Volume 2 are marked for identification

1	and are received in evidence as Complainant's Exhibit
2	В.
3	(Whereupon, the above-mentioned
4	document was marked as for
5	identification and admitted
6	into evidence as Complainant's
7	Exhibit B.)
8	MR. CAMPBELL: As with the other witnesses,
9	I assume that that is, of course, subject to our right
10	to raise applicable motions to strike concerning
11	portions of this witness' testimony as might be
12	developed through cross-examination.
13	JUDGE SIPPEL: Correct.
14	MR. SEIVER: May I proceed, Your Honor.
15	I'm sorry.
16	JUDGE SIPPEL: Are you tendering the
17	witness now?
18	MR. SEIVER: I was going to tender him for
19	cross. Yes.
20	JUDGE SIPPEL: You're tendering him as an
21	expert witness?
22	MR. SEIVER: Yes, Your Honor. I'm going to

1	tender him as an expert witness.
2	JUDGE SIPPEL: In what field?
3	MR. SEIVER: in pole engineering.
4	JUDGE SIPPEL: Pole engineering. Okay.
5	Again, I just want Mr. Campbell to be mindful of the
6	preliminary ruling that I've made with respect to the
7	objections to, you know, experts testifying with
8	respect to facts that may be related to some of the
9	holdings in the Alabama Power case.
10	All right. If there's a nexus, I'm going
11	to let them testify. If there's no nexus, they're not
12	going to just dictate to us or lecture us on what the
13	law is. Essentially, that's the cut that I'm making.
14	With that caveat, please proceed, sir.
15	CROSS-EXAMINATION
16	MR. CAMPBELL: Thank you. Good morning,
17	Mr. Harrelson.
18	THE WITNESS: Good morning.
19	BY MR. CAMPBELL:
20	Q Do you have your testimony there on the
21	stand with you that you can refer to, sir?
22	A I do have Volume 1.

1	Q Do you have a copy of your deposition
2	transcripts that were taken in this case?
3	A I do not.
4	MR. CAMPBELL: Your Honor, may I approach
5	the witness and provide him copies of his deposition
6	transcript anticipating that we may need to refer to
7	that in some point and time during examination?
8	JUDGE SIPPEL: Well, maybe sure. You
9	may.
10	MR. CAMPBELL: I have a copy for Your
11	Honor, as well. There are two volumes there.
12	JUDGE SIPPEL: All right. We already have
13	excerpts that have been marked and received into
14	evidence, correct?
15	MR. CAMPBELL: That is correct.
16	JUDGE SIPPEL: This is the full deck.
17	MR. CAMPBELL: It is. Yes, Your Honor.
18	JUDGE SIPPEL: Thank you.
19	BY MR. CAMPBELL:
20	Q And I direct your attention to Page 6 of
21	your testimony, Mr. Harrelson.
22	A I'm there.

1	Q Your pre-file written direct testimony,
2	sir.
3	A I'm there.
4	Q Looking at Lines 6 and 7 on that page, Mr.
5	Harrelson, am I accurate that you were asked to form
6	an opinion of when utility poles may be said to be at
7	full capacity?
8	A Yes.
9	Q And your basic definition of when a
10	utility pole is at full capacity is that it is not in
11	full capacity if any kind of make-ready can be
12	performed in order to accommodate an additional
13	attachment. Is that accurate?
14	A Yes. I would add any reasonable make-
15	ready, not any possible make-ready, but any
16	reasonable.
17	Q What is unreasonable make-ready?
18	A Well, if it's entirely too expensive or
19	otherwise inappropriate.
20	Q What is entirely too expensive in the
21	context of make-ready?
22	A It's possible to change out transmission

T	line structures to raise transmission lines, but it
2	would not be at all practicable as an engineer.
3	Q If a cable company were seeking access to
4	a pole that would require a transmission structure to
5	be raised and make-ready would therefore be
6	unreasonable, what would be the options available for
7	the cable company in that instance?
8	A Whatever options they can come up with
9	other than having a pole underneath the transmission
10	line to accommodate the attachment. In other words,
11	they can re-route, they can do other planning. In my
12	experience, they can bore under frequently. There are
13	construction options that cost more.
14	Q One of those options would be underground?
15	A Yes.
16	Q Any other options you can think of?
17	A Well re-route, avoid the congested area,
18	are sometimes options. Sometimes they are. Sometimes
19	they are not.
20	Q And excuse me if I don't use the correct
21	word, but you said, it might be impractical. What
22	would that mean?

1	A Just something that's either not
2	economically feasible or uses some technology that is
3	not commonplace for the utility that they're working
4	with. There's a number of practical reasons why an
5	option would be rejected.
6	Q Can you give me an example, Mr. Harrelson?
7	A If, for instance, someone had to specify
8	a self-supporting structure and they have no other
9	self-supporting structures in their whole inventory,
LO	that would be introducing a new technology or a new
L1	technique that might be reasonably determined to be
L2	unacceptable to the electric utility.
L3	Q Am I accurate, though, that your basic
L4	definition of a pole that is not at full capacity is
L5	one where a reasonable make-ready can be performed in
L6	order to accommodate another attacher?
L7	A I think so. But would you repeat it once?
L8	Q Sure. Your definition of a pole that is
L9	not at full capacity would include any pole wherein
20	make-ready, reasonable make-ready can be performed in
21	order to accommodate an additional attachment?
22	A I'm not sure You might have left out a

1	"not" in there. But let me just say that if you
2	cannot reasonably perform make-ready, including
3	changing out the structure, then that pole could be at
4	full capacity.
5	Q And the make-ready concept applies to
6	rearranging or changing out a pole with respect to
7	additional power facilities, as well. Correct?
8	A That's my opinion. Yes.
9	Q It doesn't just relate to communications
10	attachments. Correct?
11	A That's correct. The way I use the term.
12	Q And when you talk about reasonable make-
13	ready, you're talking about either rearranging the
14	facilities on an existing or taking that pole out of
15	service and putting a new pole in its place. Correct?
16	A There are some other variations, but those
17	two are definitely included.
18	Q What are the other variations?
19	A Sometimes a pole location is not the best
20	location. And the span length might be excessive. So
21	two poles would replace one. If a 40-foot pole is 400
22	feet from the next 40-foot pole, one might put a 40-

1	foot pole 300 feet from one and 300 feet from the
2	other and take out the intermediate pole. There's
3	options of moving as well as increasing the pole
4	heights and their existing locations.
5	Some other options would include removing
6	idle facilities that are not in use. That opens up
7	space.
8	Q Isn't that a rearrangement of the pole?
9	A Well, it might be. If it is, it's just a
10	distinction.
11	Q To be complete, your definition would
12	include any pole that could be rearranged, changed
13	out, or additional poles added to the line?
14	A To do what?
15	Q To make the pole not at full capacity
16	to increase the capacity on a pole.
17	A Well, make-ready would include rearranging
18	existing facilities, removing any idle facilities,
19	increasing the height of the pole or re-spacing the
20	poles and/or increasing. And it would also include an
21	evaluation of the strength of the pole.
22	Q The strength of the pole, are you talking

1	about a loading issue there as opposed to vertical
2	clearance issue?
3	A Yes.
4	Q And if you were going to do an engineering
5	analysis on any pole with respect to whether it could
6	accommodate an additional attacher, you would have to
7	do both of those things, wouldn't you?
8	A In some form. Yes. It doesn't have to be
9	extremely complicated. There are a lot of engineering
10	some people call them cookbooks or standards that
11	you can refer to, guying standards, tables, which
12	indicate the pole size and class that will hold
13	certain facilities. So it does have to be designed,
14	but it's not necessarily from pure science.
15	Q With respect to the poles that you have
16	reviewed in this case, the 100 poles that have been
17	identified by the parties, you have not performed what
18	is known as a loading analysis, have you?
19	A I have not.
20	Q Yet it is your conclusion that each of the
21	poles that you have viewed in this proceeding are at
22	full capacity. Correct?

1	A Are not
2	Q Are not at full capacity. I'm sorry.
3	A That's correct.
4	Q Okay.
5	JUDGE SIPPEL: Could you ask the witness to
6	explain what he means by loading analysis? Because
7	I'm kind of
8	MR. CAMPBELL: I'm happy to. Yes, sir.
9	THE WITNESS: When he says loading
10	analysis, to me, that implies a wind and ice loading
11	analysis. That involves determining the height of
12	every attachment on the pole, the surface area of
13	every attachment, the span length between that pole
14	and the next pole of every attachment on the pole.
15	A full analysis requires the determination
16	of the height and the surface area that's exposed to
17	wind. And also a separate calculation, that same set
18	of numbers have to be considered with respect to ice
19	loading in those zones which are susceptible to ice.
20	Now, I think all of Gulf's service
21	territory does not require designing for ice loading.
22	So there's two different zones, at least, of wind

1	loading in Gulf's territory, that which is very near
2	the coast, and then, further away from the coast.
3	So the loading analysis, if done in full,
4	is a fairly complex calculation and requires more
5	detailed information than is available in the Osmose
6	survey.
7	JUDGE SIPPEL: Thank you.
8	BY MR. CAMPBELL:
9	Q Or in the information the Complainant has
LO	provided you in this proceeding. Yes?
L1	A Yes.
L2	Q Or in any of the information you
L3	independently gathered in this proceeding?
L4	A Yes.
L5	Q Could you turn to Page 10 of your
L6	testimony, Mr. Harrelson?
17	A I'm there.
L8	Q With the variations that you have just
L9	defined concerning make-ready techniques, am I
20	accurate that in general when you're talking about
21	make-ready work in your testimony in this proceeding,
22	you're talking about rearranging the pole or changing

1	out the pole to a taller pole?
2	A Well, in general, but it's not uncommon to
3	have poles set to shorten the spans.
4	Q Yes, sir. On Page 10, Line 22 to 23
5	JUDGE SIPPEL: Sorry, what page are you on?
6	MR. CAMPBELL: Page 10 of his pre-file
7	written direct testimony, Your Honor, Line 22.
8	JUDGE SIPPEL: Thank you.
9	BY MR. CAMPBELL:
10	Q Are you there, Mr. Harrelson?
11	A Yes.
12	Q The sentence is, "Not to do rearrangement
13	and pole change-out if space is needed would be
14	ridiculous and inconsistent with industry custom and
15	Gulf's own practices." Those are the two primary
16	make-ready techniques you're talking about there?
17	A I would keep in the re-spacing of the
18	poles in the line. Because as these lines evolve over
19	decades, it's almost uniformly re-spaced. The poles
20	tend to get closer together rather than farther apart.
21	They tend to get closer together, and they tend to get
22	taller

1	Q And the two techniques that you're talking
2	about there at the bottom of Page 10 concern expanding
3	pole capacity when Gulf Power and other power
4	companies need additional capacity for their own
5	needs. Correct?
6	A Well, when the capacity is needed for any
7	suitable purpose is what I intended.
8	Q And that includes for the utilities own
9	normal business operations. Correct?
10	A It does include that. Yes.
11	Q Right. And they do that to expand the
12	capacity on an existing pole. Correct?
13	A They do that to utilize the available
14	capacity and to keep the ability to add electric
15	facilities and, if appropriate, communications
16	facilities.
17	Q Yes, sir. At the bottom of Page 10 of
18	your testimony at Line 23, the sentence begins and
19	rolls over to Page 11, "Expanding full capacity is
20	exactly what Gulf Power and all other power companies
21	do when they need more pole space and more pole line
22	capacity. You wrote that testimony. Correct?

1	A Yes.
2	Q And what you were referring to there
3	relates to the preceding sentence, does it not, on
4	Page 10 concerning rearrangement and pole change-outs?
5	A Right.
6	Q Could we go back to your definition on
7	Page 6, please, Mr. Harrelson. Actually, turn to Page
8	8 of your testimony, rather, I'm sorry.
9	JUDGE SIPPEL: On what line?
10	BY MR. CAMPBELL:
11	Q Am I accurate that beginning at Line 8 and
12	running through Line 16, you are providing what you
13	think is a reasonable definition of when a pole may be
14	realistically said to be at full capacity?
15	A Yes.
16	Q And let's tick through those items real
17	quick. One of them would be that the pole can be
18	strengthened if it's too weak. Correct?
19	A Yes.
20	Q And by that, you mean additional guying?
21	A Well, either guying, sometimes they do
22	steel splints driven at the base of the pole if the

1	pole has deteriorated. Osmose had a really big hand
2	in getting that to be commonplace in the industry.
3	Just strengthening the pole if it's too weak. There's
4	various techniques to do that.
5	Q That again
6	A But guying is one.
7	Q And that would be a loading consideration
8	more than a vertical clearance capacity situation.
9	Correct?
10	A Loading in its rather simple form that if
11	it doesn't have the support to handle tangential
12	forces or either to maintain something close to its
13	original strength as in when it's rotted.
14	Q The second consideration for determining
15	whether a pole is at full capacity, in your opinion,
16	is due to the facilities' need to be rearranged.
17	Correct?
18	A Correct.
19	Q The third consideration in your testimony
20	is whether the poles need to be re-spaced if they are
21	too far apart. Right?
22	A That should be considered. Yes.

1	Q And that's a consideration that you have
2	to take into account not only a single pole, but you
3	have to look at the poles around it in the line.
4	Correct?
5	A That's correct.
6	Q So that's not a pole by pole analysis.
7	That's something you have to do with the network or
8	the section of the network.
9	A I believe it's a pole by pole analysis
10	because you have to look at a pole and see if there's
11	a way to accomplish the engineering goal that you
12	have, whether it's something for the power company or
13	something for a communications company.
14	So if you have a problem with a pole, your
15	goal is to resolve that problem with the pole. If the
16	economic sensible solution is to place two poles and
17	remove that one, it is a pole by pole analysis, but it
18	involves more than one pole.
19	Q Okay. The next consideration in your
20	testimony is whether the pole needs to be replaced
21	with a taller or stronger pole. Correct?

Α

Yes.

22

1	Q And those are really two different things,
2	or they can be. Can't they?
3	A Usually, in practice, it's both. The
4	taller pole is a stronger pole. They go up in
5	diameter at the base as they go up in height. If not,
6	they'd be taller and weaker.
7	Q What is class as it relates to a utility
8	pole?
9	A Class is a designation that relates to the
LO	diameter of the pole at the ground and at the top.
L1	It's a standard of the pole industry. It shows up in
L2	the typical specifications books of the large electric
L3	companies or associations. And a Class 5 Pole is
L 4	lesser diameter than a Class 4. 4 is a lesser
L5	diameter than a Class 3. And so forth all the way
L6	down to Class 0.
17	And then, they go into a different set of
L8	classifications for the really large transmission-type
19	poles. And I'm speaking of wood poles.
20	Q And a lower class pole, from a load
21	perspective, is stronger. Correct?
22	A It has more wood in it. And depending on

1	the application of the loads near the top of the pole,
2	it has more ability to withstand force at the ground
3	line, for instance. If it's guyed, then you calculate
4	the force up to the point where it's guyed.
5	Q And whenever you talk about force, that is
6	a loading consideration as opposed to a vertical
7	clearance consideration. Correct?
8	A That's right.
9	Q Could you look, Mr. Harrelson, to the
10	screen up here. I'm going to put up a picture of a
11	pole so we can help put this definition context. This
L2	is in Gulf Power Exhibit 42, and it is Pole Number 28.
13	You've seen this picture before, correct?
14	A I have.
15	Q Now, am I accurate, Mr. Harrelson, that
16	this pole has a top to it. Right?
17	A It does.
18	Q And it has a bottom to it. Right?
19	A Yes.
20	Q Part of it is in the ground. We can't see
21	that. Correct?
22	A Right.

1	Q And it has certain unique characteristics
2	to this pole that would differentiate it from other
3	poles in the line. Correct?
4	MR. SEIVER: Objection as to form. I'm not
5	sure what he's talking about.
6	JUDGE SIPPEL: I'm going to overrule the
7	objection. The witness is doing fine with it.
8	THE WITNESS: There are unique
9	characteristics from pole to pole is at the restate
10	the question.
11	BY MR. CAMPBELL:
12	Q One pole is not exactly like the other, is
13	it?
14	A In many respects, that correct. It's
15	JUDGE SIPPEL: You've answered the
16	question. If you want more, he'll ask for you.
17	BY MR. CAMPBELL:
18	Q Am I accurate, Mr. Harrelson, that for
19	purposes of defining when a pole is at full capacity
20	it's your opinion that you cannot just look at this
21	photograph or go out in the field and look at this one
22	pole, this stick of wood?

1 Α engineering determination of An 2 rearrangement should be done or when change-outs should be done involves looking at 3 all of the 4 attachments on the individual pole as well as the 5 connecting spans to any adjacent pole or structure. The code, the National Electric Safety 6 7 Code, addresses requirements for separation on the 8 pole. Those issues you can resolve by looking at a 9 pole. 10 It also address height requirements above 11 different surfaces such as highways, parking lots or 12 areas that are only accessible to pedestrians. In 13 some instances, wires even cross over buildings, so the code addresses that. 14 So you must, in order to 15 make a complete determination of if a pole requires 16 make-ready, the attachment points on the pole and the 17 relative positions of all the wires in spans from that 18 pole to whatever it connects to. 19 0 is your testimony that you can't 20 perform that analysis at any fixed moment in time, 21 however. Correct? 22 Α No. I don't think I said that. At a